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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/091,154	03/05/2002	Xingping Zhang	60170P1	6017

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[REDACTED] EXAMINER

KUBELIK, ANNE R

[REDACTED] ART UNIT [REDACTED] PAPER NUMBER

1638

DATE MAILED: 05/20/2003

[Handwritten Signature]

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/091,154	ZHANG ET AL.	
	Examiner	Art Unit	
	Anne R. Kubelik	1638	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) Responsive to communication(s) filed on _____.
- 2a) This action is **FINAL**. 2b) This action is non-final.
- 3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) Claim(s) 28-49 is/are pending in the application.
 - 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) Claim(s) _____ is/are allowed.
- 6) Claim(s) 28-49 is/are rejected.
- 7) Claim(s) _____ is/are objected to.
- 8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) The specification is objected to by the Examiner.
- 10) The drawing(s) filed on with the application is/are: a) accepted or b) objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) The proposed drawing correction filed on _____ is: a) approved b) disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.
- 12) The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) All b) Some * c) None of:
 1. Certified copies of the priority documents have been received.
 2. Certified copies of the priority documents have been received in Application No. _____.
 3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

- 14) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
 - a) The translation of the foreign language provisional application has been received.
- 15) Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) Paper No(s). _____. |
| 2) <input checked="" type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449) Paper No(s) <u>4,5</u> . | 6) <input type="checkbox"/> Other: _____. |

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DETAILED ACTION

1. Claims 28-49 are pending.

Claim Objections

2. Claims 28-29, 33-34, 36-46 and 49 are objected to because of the following informalities:

In claim 28, it is suggested that “having been” be replaced with --, wherein the seed is--.

In claim 29, it is suggested that “seed of said line having been” be replaced with --, wherein seed of said line is--.

Claims 33-34, 39-42 and 44-45 start with an improper article.

In claim 36, line 2, “7-11lbs/in²” should be replaced with --7-11 lbs/in²--.

Claims 37, 46 and 49 are missing an --and-- at the end of part (b).

Claim 38 is missing an --and-- at the end of part (a).

Claim 43, part (a), has an improper article before “pollenizer”.

Claims 46 and 49, parts (a), have an improper article before “watermelon”.

Claim 49 is missing an --and-- before the second “wherein” in line 3.

3. Claims 33-36 are objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The limitations in the claims are properties of the plant of claim 29, that is line NO1F3203B, and thus do not further limit the plant of claim 29.

4. Claim 39 is objected to under 37 CFR 1.75(c), as being of improper dependent form for

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failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form. The claim does not limit claim 38, the claim upon which it is dependent. Claim 38, part (b) indicates that the rows of diploid plants are $\frac{1}{3}$ to $\frac{1}{2}$ the width of the triploid rows, while claim 39 indicates that the rows of diploid plants are $\frac{1}{2}$ to $\frac{2}{3}$ the width of the triploid rows. The range recited in claim 39 does not fall within the range recited in claim 38.

Claim Rejections - 35 USC § 112

5. The following is a quotation of the first paragraph of 35 U.S.C. 112:

The specification shall contain a written description of the invention, and of the manner and process of making and using it, in such full, clear, concise, and exact terms as to enable any person skilled in the art to which it pertains, or with which it is most nearly connected, to make and use the same and shall set forth the best mode contemplated by the inventor of carrying out his invention.

6. Claims 28-49 are rejected under 35 U.S.C. 112, first paragraph, as failing to comply with the enablement requirement. The claims contain subject matter that was not described in the specification in such a way as to enable one skilled in the art to which it pertains, or with which it is most nearly connected, to make and/or use the invention.

Since the seed claimed is essential to the claimed invention, it must be obtainable by a repeatable method set forth in the specification or otherwise be readily available to the public. If a seed is not so obtainable or available, a deposit thereof may satisfy the requirements of 35 U.S.C. 112. The specification does not disclose a repeatable process to obtain the exact same seed in each occurrence and it is not apparent if such a seed is readily available to the public. It is noted that Applicant has deposited seeds for NO1F3203B at the ATCC, but there is no indication as to

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public availability. If the deposit of these seeds is made under the terms of the Budapest Treaty, then an affidavit or declaration by the Applicant, or a statement by an attorney of record over his or her signature and registration number, stating that the seeds will be irrevocably and without restriction or condition released to the public upon the issuance of a patent would satisfy the deposit requirement made herein. A minimum deposit of 2500 seeds is considered sufficient in the ordinary case to assure availability through the period for which a deposit must be maintained.

If the deposit has not been made under the Budapest Treaty, then in order to certify that the deposit, meets the criteria set forth in 37 CFR 1.801-1.809, Applicant may provide assurance of compliance by an affidavit or declaration, or by a statement by an attorney of record over his or her signature and registration number showing that

- (a) during the pendency of the application, access to the invention will be afforded to the Commissioner upon request;
- (b) all restrictions upon availability to the public will be irrevocably removed upon granting of the patent;
- (c) the deposit will be maintained in a public depository for a period of 30 years or 5 years after the last request or for the enforceable life of the patent, whichever is longer;
- (d) the viability of the biological material at the time of deposit will be tested (see 37 CFR 1.807); and
- (e) the deposit will be replaced if it should ever become inviable.

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 33-49 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter that Applicant regards as the invention. Dependent claims are included in all rejections.

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It is unclear in claims 33-36, if the limitations merely further describe the plant of claim 29, or if the plant of claim 29 has been modified in some way to now also have these leaf and fruit characteristics.

Claim 35-36 lack antecedent basis for the limitation “said fruit” in line 1.

Claims 37-38, 43, 46 and 49 are indefinite in their recitation of the phrase after “comprising” in line 1. It is unclear what the phrase modifies - the fruit, plants or variety? The method? By position in the claim it modifies “fruit” in claims 37-38, “plants” in claim 43, “plant” in claim 46, and “variety” in claim 49. If Applicant wishes the phrase to modify “method” it is suggested that “comprising” be replaced with --, wherein the method comprises--.

Claim 37, part (b), lacks antecedent basis for the limitation “diploid pollenizer watermelon plant according to claim 29”.

It is unclear where the method steps recited in claims 40-42 fall in the method of claim 38. The claims recite a further step of planting rows of diploid watermelon plants. Claim 38 already recites such a step - are there rows one-third to one-half the width of the triploid rows, as recited in claim 38, AND rows after every two, three or four triploid rows, as recited in claims 40-42, respectively?

Claim 43, part (a), lacks antecedent basis for the limitation “pollenizer watermelon plant according to claim 29”.

Claim 44-45 lack antecedent basis for the limitation “method of increasing the yield of seedless watermelon plants according to claim 43” as claim 43 is drawn to a method of increasing the yield of triploid, seedless watermelon plants.

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It is unclear in claim 48 what it done to process the seed. Processing it for extraction of some component? Processing it for later planting? Each purpose would have very different method steps.

Claim 49, part (a), lacks antecedent basis for the limitation "the male parent" and "the female parent".

9. Claims 37 and 43-45 are rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. Step (b) plants watermelon plants and step (c) harvests triploid watermelon fruit. However there is no step in which said fruit is produced.

10. Claim 38 rejected under 35 U.S.C. 112, second paragraph, as being incomplete for omitting essential steps, such omission amounting to a gap between the steps. See MPEP § 2172.01. The method is one of producing triploid, seedless watermelon fruit; however in no step is such fruit produced. The only steps are those of planting plants.

Claim Rejections - 35 USC § 102 - 35 USC § 103

11. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless --

- (e) the invention was described in-
- (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that a patent shall not be deemed filed in the United States for the purposes of this subsection based on the filing of an international application filed under the treaty defined in section 351(a).

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12. The following is a quotation of 35 U.S.C. 103(a), which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

13. Claims 28-49 are rejected under 35 U.S.C. 102(e) as anticipated by or, in the alternative, under 35 U.S.C. 103 as obvious over Elmstrom (US Patent 6,355,865, filed 26 May 1999).

The plant of the instant application, NO1F3203B, and the plant taught by Elmstrom, Pollenizer 1, have the same traits including a high number of male flowers (column 8, lines 59-67), early flowering (column 9, lines 11-20), a fruit weight of less than 5 lbs (claim 5), for example. Elmstrom et al also teach method of using Pollenizer 1 to produce triploid seedless watermelon fruit, wherein Pollenizer 1 is planted every 3rd row or every 4-6th plant, and wherein the fruit is harvested (column 7, lines 25-54); this method increases the yield of the triploid seedless watermelon (column 7, lines 57-65). Elmstrom also teaches propagation of the pollenizer 1 (column 6, lines 63-67). Thus, the NO1F3203B watermelon plants, and methods of their use, appear to be identical to the Pollenizer 1 plants and methods of their use.

As the diameter of the vines of the pollenizer is 65% less than the triploid plants, it would be obvious for the rows of the diploid plant to be accordingly less wide than the width of the triploid rows. Propagation of the Pollenizer 1 would involve production of seeds, and drying and ‘processing’ the seeds for further production of plants. Furthermore, it would be obvious to use Pollenizer 1 in breeding other similar plants, for example to introduce resistance or tolerance to various plant stresses.

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Alternatively, if the claimed plants and seeds of the instant invention are not identical to Pollenizer 1, then it appears that Pollenizer 1 only differs from the claimed plants and seeds due to minor morphological variation, wherein said minor morphological variation would be expected to occur in different progeny of the same cultivar, and wherein said minor morphological variation would not confer a patentable distinction to NO1F3203B-derived plants. Thus, the claimed invention was *prima facie* obvious as a whole to one of ordinary skill in the art at the time it was made, if not anticipated by Pollenizer 1 watermelon plants.

Conclusion

14. No claim is allowed.

15. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Anne R. Kubelik, whose telephone number is (703) 308-5059. The examiner can normally be reached Monday through Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Amy Nelson, can be reached at (703) 306-3218. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 872-9306 for regular communications and (703) 872-9307 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to Customer Service at (703) 308-0198.

Anne R. Kubelik, Ph.D.
May 15, 2003

